**COMMONWEALTH OF MASSACHUSETTS**

**APPELLATE TAX BOARD**

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| **DIGITAL 55 MIDDLESEX, LLC** | **v.** | **BOARD OF ASSESSORS OF THE TOWN OF BILLERICA** |

Docket Nos.: F317868 (FY 12)<br>F319264 (FY 13)

Promulgated:<br>September 21, 2017

These are appeals filed under the formal procedure pursuant to G.L. c. 59, §§ 64 and 65 from the refusal of the Board of Assessors of the Town of Billerica (the "assessors" or "appellee") to abate taxes on certain parcels of real estate in the Town of Billerica assessed to Digital 55 Middlesex, LLC ("Digital" or the "appellant") under G.L. c. 59, §§ 11 and 38 for fiscal years 2012 and 2013 (together, the "fiscal years at issue").

Commissioner Good heard these appeals. Chairman Hammond and Commissioners Scharaffa, Rose, and Chmielinski joined her in the decisions for the appellant.

These findings of fact and report are made pursuant to a request by the appellee under G.L. c. 58A, § 13 and 831 CMR 1.32.

*David J. Rasnick,* Esq., for the appellant.

*Patrick J. Costello,* Esq., for the appellee.

## FINDINGS OF FACT AND REPORT

Based on the testimony and documentary evidence entered into the record in these appeals, the Appellate Tax Board (the "Board") made the following findings of fact.

On January 1, 2011 and January 1, 2012, the relevant valuation and assessment dates for the fiscal years at issue, the appellant was the assessed owner of a 14.53-acre parcel of land, approximately 90% of which was located in Billerica and approximately 10% of which was located in the neighboring community of Bedford. The Billerica portion of the parcel, which is the only portion in dispute in these appeals, has an address of 55 Middlesex Turnpike and is improved with a one-story building, constructed in the 1970s, containing approximately 106,000 square feet of gross leasable area ("subject property").

For fiscal year 2012, the assessors valued the subject property at $59,036,200, and assessed a tax thereon, at the rate of $31.93 per thousand, in the total amount of $1,885,025.87. The appellant paid the tax due in full without incurring interest. On February 1, 2012, the appellant timely filed its Application for Abatement with the assessors, which was deemed denied on May 1, 2012.[1] The appellant timely filed its appeal for fiscal year 2012 with the Board on July 23, 2012, and on the basis of the foregoing facts, the Board found and ruled that it had jurisdiction to hear and decide the fiscal year 2012 appeal.

For fiscal year 2013, the assessors valued the subject property at $59,036,200, and assessed a tax thereon, at the rate of $32.89 per thousand, in the total amount of $1,941,700.62. The appellant paid the tax due in full without incurring interest. On January 22, 2013, the appellant timely filed an Application for Abatement with the assessors, which was deemed denied on April 22, 2013.[2] The appellant timely filed its appeal for fiscal year 2013 with the Board on May 13, 2013, and on the basis of the foregoing facts, the Board found and ruled that it had jurisdiction to hear and decide the fiscal year 2013 appeal.

The hearing of these appeals took place over the course of five days and featured the testimony of numerous witnesses, including: Dianna Maddocks, the Director of Asset Management for the appellant's parent company, Digital Realty Trust ("DRT"); William Frick, the Data Center Manager for the subject property;

[1] The assessors' denial notice incorrectly indicated that the abatement application was deemed denied on April 30, 2012. The assessors could have acted on the application at any time through April 30, 2012; the application was deemed denied the following day, May 1, 2012. *See* G.L. c. 58A, § 7 and G.L. c. 59, §§ 64 and 65.

[2] The assessors' fiscal year 2013 denial notice also listed an incorrect denial date. Although the denial notice indicated a deemed denial date of April 5, 2013, the application was deemed denied on April 22, 2013, three months after the January 22, 2013 filing of the application. *See* footnote 1, *supra*.

John J. Leary, a certified real estate appraiser whom the Board qualified as a valuation expert and who testified on behalf of the appellant; and George E. Sansoucy, a certified real estate appraiser whom the Board qualified as a valuation expert and who testified on behalf of the assessors.

**I. The Subject Property and Its Current Use as a Data Center**

The subject property's building is a brick-and-masonry, single-story building that was built in 1970 and contains approximately 106,000 square feet of leasable area. Originally built as a manufacturing building, it was converted for use as an office building in the 1980s. In 2000, it was converted once again for use as a data center, which was an emerging use at that time.

Data centers are facilities used to house computer data servers and related equipment. Sometimes referred to as "server farms," data centers lease space to other entities, typically large institutions or organizations that have significant data storage needs. In addition to the physical space, the most critical offering provided by data centers is guaranteed continuous power supply. Data centers generally have redundant power sources so as to ensure continuous power supply. Accordingly, data centers require significant dedicated space for battery back-up equipment areas as well as uninterrupted power source ("UPS") rooms, with almost half of the space in any such data center dedicated to these areas.

Other important features of data centers include building security and protections from environmental forces, such as water or fire damage. The pod space, as it is called, leased by data center tenants usually features raised flooring and air conditioning units to keep the equipment safe and at an optimal temperature.

There are two types of data centers, wholesale and colocation facilities. Wholesale data centers, including the subject property, involve the leasing of an empty data center pod along with the provision of power, with the tenants supplying their own rack and server equipment. In colocation centers, the provider owns the servers and racks, and leases those along with the space. Leases at colocation facilities also sometimes include support services, whereas in wholesale centers, servicing of the equipment is usually performed by the tenant, who accesses the building and pod space with a secured access card.

Because power supply is paramount in the data center industry, utility costs represent a significant share of operating expenses, and they in turn influence asking rents. Therefore, those market areas in the United States with lower utility costs, particularly in the South, are very desirable in the data center industry. In addition, California has become a very popular market for data centers due to the abundance of high technology companies located there.

**II. DRT and Its Purchase of the Subject Property**

Prior to 2000, most data centers were owner occupied or net leased by a single, large tenant. At and into the turn of the millennium, the concept of multi-tenant data centers began to emerge. DRT was formed in 2004 as a real estate investment trust[3] to take advantage of and invest in this emerging niche market. Within just a few years of its formation, DRT had amassed a large portfolio of data centers across the country.

In January of 2010, DRT purchased the assets of Sentinel Properties, which was another data center operator. This purchase was an off-market transaction, initiated by DRT with an eye toward entering the New England market. The purchase was also a portfolio transaction, involving the subject property, a data center in Needham, Massachusetts, and another data center in Connecticut. The total purchase price was $375 million, and it included several non-realty components, including personal property and a non-compete agreement, along with the leases in place.

[3] Under § 856(a) of the Internal Revenue code, real estate investment trusts, or REITs, are special types of investment vehicles that are required to have a majority of their assets consist of real estate. As long as the REIT meets this and certain other technical requirements, it is afforded favorable tax treatment.

## III. The Appellant's Valuation Evidence

The appellant presented its case-in-chief through the testimony and appraisal report of John J. Leary, whom the Board qualified as a real estate valuation expert. To prepare for his appraisal, Mr. Leary visited and inspected the subject property several times, and also spoke with building personnel.

To begin the appraisal process, Mr. Leary first determined the subject property's highest and best use, and he considered those uses both as vacant and as improved. Mr. Leary noted that, given the economic recession in effect during the relevant dates of valuation in these appeals, the highest and best use of the subject property as vacant would likely be to hold for development. Mr. Leary concluded that the subject property's highest and best use as improved was its current use as a data center, and that was his ultimate conclusion of highest and best use.

Mr. Leary next considered appropriate valuation methodologies. Given the building's age of over 40 years, Mr. Leary concluded that the cost approach was not a useful valuation approach. Mr. Leary likewise declined to utilize the sales-comparison methodology, after noting that there were not a reliable number of local, comparable sales of data centers, and that most investors in data centers are motivated by the income stream.

He therefore relied exclusively on the capitalization of income approach to value the subject property.

The first step in Mr. Leary's income-capitalization analysis for fiscal year 2012 was the selection of appropriate market rents. Mr. Leary first analyzed the subject property's actual rents.[4] He noted that the average annual rent at the subject property was $122.01 per square foot. Mr. Leary also reviewed leases of other wholesale data center spaces in Massachusetts. Relevant information regarding those spaces and rents is summarized in the following table:

| **Location** | **Lease Date** | **Square Ft. Leased** | **First Year Rent Per Sq. Ft.** | **Average Rent Per Sq. Ft.** |
|---|---|---|---|---|
| 200 Quannapowitt Pkwy., Wakefield | 6/2011 | 5,037 | $104.83 | $104.83 |
| 35 McGrath Hghwy., Somerville | 5/2011 | 38,638 | $75.00 | $75.00 |
| One Summer St., Boston | 3/2010 | 1,653 | $83.00 | $100.00 |
| One Summer St., Boston | 2/2010 | 6,833 | $83.00 | $100.00 |
| One Summer St., Boston | 3/2009 | 56,585 | $62.50 | $75.00 |

Based on the subject property's actual rents, as well as the comparable area data center rents, Mr. Leary concluded a market rent for the subject property of between $110.00 and $115.00 per square foot. Applying these rates to the subject property's

[4] Rents at data centers can be quantified in several different ways, including dollars per kilowatt of energy capacity, dollars per square foot of raised floor space, or dollars per square foot of rentable area, which includes the space dedicated to the necessary back-up energy equipment. For consistency and ease of reference when talking about both actual and comparable rents, the Board will refer to rents as measured by dollars per square foot of total rentable area.

106,000 square feet of rentable area resulted in a range of $11,600,000 to $12,190,000 in potential gross rent.

In addition to rent, data center tenants also pay reimbursements for utility expenses. Mr. Leary therefore considered appropriate reimbursement rates, and he began by analyzing the subject property's operating statements. Those statements showed that in calendar years 2011 and 2012, holdover tenants at the subject property were paying at a fixed rate, with an average reimbursement of metered utilities of about $35.85 per rentable square foot. He also reviewed the actual electricity expenses for the subject property during those years, which were approximately $45.50 per rentable square foot. Based on these figures, Mr. Leary estimated that an appropriate reimbursement rate was between $40.00 and $42.50 per rentable square foot. Applying these rates to the subject property's 106,000 square feet of rentable area resulted in a range of $4,240,000 to $4,505,000 in reimbursements.

After adding the reimbursements to the potential gross rent, Mr. Leary determined a range of potential gross income for the subject property of $15,900,000 to $16,695,000. He next considered appropriate rates of vacancy and collection loss.

Mr. Leary began by noting that the subject property had an actual vacancy rate of approximately 10% during the periods relevant to these appeals. He also gave consideration to occupancy rates at other area data centers and nationwide trends as reflected in data center industry publications, including newsletters published by Grubb & Ellis and Avison Young. Those publications showed that in 2009, data center occupancy rates were approximately 90%, but by the second quarter of 2012, they had declined to 81%. Mr. Leary opined that this decrease was partly due to the increase in the development of data centers and entities investing in them. For example, he noted that in November of 2010, there were only five national wholesale data center developers, but by the second quarter of 2012, there were 14 such developers in operation. The overall effect of the trend, according to Mr. Leary, was an increase in availability of space and corresponding increase in vacancy rates.

As an example of the "soft market conditions," Mr. Leary pointed out that the data center at 200 Quannapowitt Parkway in Wakefield, which was also owned by DRT, was purchased with a goal of converting just under half of the building's 218,956 square feet of space into wholesale data center space. However, as of 2011, only one data center pod of 14,097 square feet had been created, and only 5,357 square feet of that space was leased, for an occupancy rate of 38.7%. After taking all of this data into consideration, Mr. Leary concluded that a stabilized rate of vacancy and credit loss ranging from 12.5% to 15% was appropriate.

The next step in Mr. Leary's income-capitalization approach was the determination of appropriate operating expenses. To do this, he reviewed the subject property's historical operating expenses for calendar years 2011 and 2012. For calendar year 2011, he noted that operating expenses, exclusive of real estate taxes, totaled $65.13 per rentable square foot, and for calendar year 2012, they totaled $71.62 per rentable square foot. Mr. Leary also analyzed the operating expenses of a 132,600-square-foot corporate data center in central Massachusetts, and found this property's actual operating expenses to be fairly consistent with those of the subject property. Accordingly, he concluded that appropriate operating expenses for the subject property ranged from $65.00 to $70.00 per rentable square foot.

After applying all of these factors – gross rent, reimbursements, vacancy and credit loss percentage, and operating expenses per square foot – to the subject property's 106,000 square feet of rentable area, Mr. Leary determined a net operating income for the subject property ranging from $6,770,750 to $7,022,500 for fiscal year 2012.

The final step in Mr. Leary's income-capitalization analysis was the determination of an appropriate capitalization rate. To begin that process, he first reviewed seven sales of data centers that took place nationwide during calendar years 2011 and 2012, and extrapolated the capitalization rates from those transactions. Those rates ranged from 6.2% to 10.2%. Mr. Leary noted that the two lowest rates - 6.2% and 7.5% - involved sales in Virginia and California, which are both very favorable locations for data centers. He further noted that they involved the same buyer, and those rates likely reflected that particular buyer's investment criteria. He therefore considered them not to be reflective of market rates. The remaining transactions had capitalization rates that fell within the tighter range of 8.1% to 10.2%, with an average rate of 8.8%. Mr. Leary noted that the lower end of the rates involved sales in Georgia, which has lower utility costs than Massachusetts and is therefore a more favorable location for data centers, while the highest of the rates involved a sale in Michigan, which has higher utility costs than Massachusetts and is therefore a less favorable location for data centers.

Mr. Leary also consulted industry publications, including the aforementioned newsletters as well as Real Estate Research Corporation's quarterly *Real Estate Report* ("RER"). The information contained within the RER is not specific to data centers. However, Mr. Leary determined that the property category most similar to the subject property that is discussed in the RER is the industrial/R & D category. For the first quarter of 2011, capitalization rates in the Eastern United States market in that category ranged from 6.0% to 11.0%, with an average of 9.0%. It was Mr. Leary’s opinion that this broad range of rates was indicative of continued volatility in the market, a lingering effect of the economic recession that commenced in 2008. He also opined that the general risks inherent in investing in data centers, coupled with the fact that Massachusetts is a somewhat less desirable location for them, warranted a slightly higher premium over the average of the indicated industrial/R & D rates. Mr. Leary therefore determined that an appropriate capitalization rate for the subject property for fiscal year 2012 was between 9.5% and 9.75%.

Because real estate taxes had not been included in the calculation of net operating income, Mr. Leary added to these base rates a tax factor of 3.19%, to reflect Billerica’s commercial tax rate of $31.90 per thousand, resulting in loaded capitalization rates ranging from 12.69% to 12.94%. Applying these rates to his range of net operating incomes resulted in the following range of indicated values:

| **NOI ($)** | **Rate (%)** | **Rounded Value ($)** | **Rounded Value/ psf ($)** |
|---|---|---|---|
| 6,770,750 | 12.94 | 52,300,000 | 493.40 |
| 6,770,750 | 12.69 | 53,400,000 | 503.77 |
| 7,022,500 | 12.94 | 54,300,000 | 512.26 |
| 7,022,500 | 12.69 | 55,300,000 | 521.70 |

Mr. Leary ultimately concluded from this range a fair cash value of $54,000,000 for the subject property for fiscal year 2012.

He then multiplied that amount by 90% to determine the amount of value properly attributable to the Billerica portion of the subject property, which resulted in a final opinion of fair cash value of $48,600,000 for fiscal year 2012.

Much of Mr. Leary's income-capitalization analysis for fiscal year 2013 was premised on the same data and assumptions as his analysis for fiscal year 2012, including his rents and reimbursements, and for efficiency only those portions of his 2013 analysis that departed from his 2012 analysis will be discussed.

One of the factors that differed was Mr. Leary's conclusion as to vacancy rate and credit loss. For fiscal year 2013, he determined that an appropriate rate ranged from 15% to 17.5%, an increase from his estimate for vacancy and credit loss for fiscal year 2012. It was his opinion that a slight increase was warranted given the continued increase in new data center development and corresponding availability of space, including a direct competitor in Billerica with the advent of the Verizon-Terremark data center in January of 2012. Similarly, Mr. Leary concluded that a slight increase in operating expenses over his figures for fiscal year 2012 was warranted, and he therefore utilized an operating expense ranging from $67.50 to $72.50 per square foot.

After applying all of these factors – gross rent, reimbursements, vacancy and credit loss percentage, and operating expenses per square foot – to the subject property's 106,000 square feet of rentable area, Mr. Leary determined a net operating income for the subject property ranging from $6,088,375 to $6,360,000 for fiscal year 2013.

Mr. Leary then considered appropriate capitalization rates. He looked at many of the same industry sources and sales from which to derive capitalization rates as he had for his fiscal year 2012 analysis, and those sources yielded much of the same information. However, he noted that for the first quarter of 2012, the average reported industrial/R & D rate had slightly improved, decreasing to 8.8% from 9.0% the previous year, which Mr. Leary opined was a reflection of the very beginning of the gradual economic recovery from recession. Accordingly, he selected a slightly lower range of capitalization rates, from 9.25% to 9.50%, than he had for the previous fiscal year. To those base rates he added the tax factor of 3.29% to reflect Billerica's commercial tax rate of $32.90 per thousand, to arrive at loaded capitalization rates ranging from 12.54% to 12.79%. Applying these rates to his range of net operating incomes resulted in the following range of indicated values:

| NOI ($) | Rate (%) | Rounded Value ($) | Rounded Value/ psf ($) |
|---|---|---|---|
| 6,088,375 | 12.79 | 47,600,000 | 449.06 |
| 6,088,375 | 12.54 | 48,600,000 | 458.49 |
| 6,360,000 | 12.79 | 49,700,000 | 468.87 |
| 6,360,000 | 12.54 | 50,700,000 | 478.30 |

Mr. Leary ultimately concluded from this range a fair cash value of $49,000,000 for the subject property for fiscal year 2013. He then multiplied that amount by 90% to determine the amount of value properly attributable to the Billerica portion of the subject property, which totaled $44,100,000.

**IV. The Assessors' Valuation Evidence**

The assessors presented their case-in-chief through the testimony and appraisal report of George E. Sansoucy, whom the Board qualified as a real estate valuation expert. To prepare for his appraisal, Mr. Sansoucy personally inspected the subject property on more than one occasion. He also began by making a determination of the subject property's highest and best use. Like Mr. Leary, Mr. Sansoucy concluded that the highest and best use of the subject property was its continued use as a wholesale data center.

Mr. Sansoucy next considered appropriate valuation methodologies. He ultimately used four different approaches to value the subject property, including the cost approach, the sales-comparison approach, and the income-capitalization approach, both with a direct-capitalization methodology and the discounted-cash-flow technique. Each of his valuation approaches and conclusions are discussed below.

**A. Mr. Sansoucy's Sales-Comparison Analysis**

To begin his sales-comparison analysis, Mr. Sansoucy researched several sources for timely, comparable data center sales. Although there had been activity in the market nationally, he concluded that none of the transactions was timely or comparable enough to the subject property to provide a reliable indication of its fair market value for the fiscal years at issue. Accordingly, he opined that only the January 2010 sale of the subject property provided a reliable indication of its fair market value.

Although the subject property was sold along with two other data centers as part of a portfolio transaction, an allocated purchase price for it was reported in three different sources. First, DRT's 2010 Form 10-K, which was filed with the U.S. Securities and Exchange Commission, listed a total allocated price of $79,913,000 for the subject property. Second, insurance documents filed with the Commonwealth Land Title Company in January of 2010 indicated a total consideration paid for the subject property of $88,490,000, rounded. And finally, documents prepared by an accounting firm retained by DRT to perform a purchase price allocation allocated approximately

$78,000,000 of the total purchase price for the tangible property acquired by DRT related to the subject property.

It was Mr. Sansoucy's opinion that the average of these three allocations provided a reliable indication of the subject property's fair market value. Accordingly, his opinion of value as derived through the sales-comparison analysis was $85,501,000 for both of the fiscal years at issue.

**B. Mr. Sansoucy's Cost Approach**

The cost approach is a valuation methodology that calculates the value of property by estimating the current cost to construct the existing improvements, deducting for depreciation, and then adding a land value. It is a useful approach for estimating the value of newer properties or special-purpose properties, which are properties not bought or sold with frequency in the market and having so singular or unusual a use that their value cannot be reliably ascertained by reference to market data. It was Mr. Sansoucy's opinion that the cost approach was a useful approach for valuing the subject property, as data centers are, in his opinion, special-purpose properties.

Mr. Sansoucy consulted several sources to gather information for his cost approach. His primary source of information was an industry publication, *RS Means*, which provides direct and indirect costs at the subcontractor level for different property types. *RS Means* also provides an index for making adjustments by region. As a check on the information provided by *RS Means*, Mr. Sansoucy consulted additional industry publications, including *Marshall & Swift*, *Craftsman*, and other publicly available information.

For fiscal year 2012, Mr. Sansoucy concluded a replacement-cost new for the subject property, as of January 1, 2014, of $104,653,500. After trending the information back to January 1, 2011, and accounting for depreciation, he arrived at an indicated value of $82,289,200 as determined through the cost approach. For fiscal year 2013, he concluded a replacement-cost new for the subject property, as of January 1, 2014, of $104,374,700. After trending the information back to January 1, 2012, and accounting for depreciation, Mr. Sansoucy arrived at an indicated value of $81,965,600 as determined through the cost approach.

**C. Mr. Sansoucy's Direct Income-Capitalization Analysis**

Like Mr. Leary, Mr. Sansoucy performed a direct income-capitalization analysis. Rather than referring to market data to determine appropriate rents, vacancies, and expenses, Mr. Sansoucy instead used the subject property's actual reported net operating incomes. For fiscal year 2012, he used the subject property's reported stabilized operating cash flow of $10,147,570. For fiscal year 2013, he used the subject property's reported stabilized operating cash flow of $10,074,406.

To determine an appropriate capitalization rate, Mr. Sansoucy consulted a range of sources, including industry publications such as *The Korpacz Survey* ("*Korpacz*"). For the Boston region, *Korpacz* reported average capitalization rates of 8.46% for the fourth quarter of 2011 and 8.31% for the fourth quarter of 2012.

Mr. Sansoucy also extracted capitalization rates from four recent sales of data centers, including the sale of the subject property. Those rates ranged from 6.56% to 9.0%. He also referenced the capitalization rates arrived at through his discounted-cash-flow analysis, as discussed below in sub-section D. Those rates were 10.99% for fiscal year 2012 and 11.05% for fiscal year 2013, although Mr. Sansoucy noted that those rates represented the high end of the range, because discounted-cash-flow analyses assume a negative growth rate. After noting that these rates had a mean of 8.88% and a median of 8.48%, and taking into account increasing competition in the data center industry, Mr. Sansoucy concluded that a capitalization rate of 10.0% was appropriate for both of the fiscal years at issue.

After applying his selected capitalization rate to the subject property's reported stabilized operating cash flow, Mr. Sansoucy arrived at an opinion of fair market value for the subject property of $101,147,570 for fiscal year 2012 and $100,744,060 for fiscal year 2013.

**D. Mr. Sansoucy's Discounted-Cash-Flow Analysis**

Mr. Sansoucy also performed a capitalization-of-income analysis using the discounted-cash-flow technique, which forecasts net operating income from the present date forward, for a period of years, and then adjusts that income by applying an appropriate discount rate, to arrive at a present value. *See generally* APPRAISAL INSTITUTE, THE APPRAISAL OF REAL ESTATE 539-41 (13th ed. 2008).

For his discounted-cash-flow analysis, Mr. Sansoucy selected a period of 20 years. He began by using the subject property's actual reported operating revenues as well as its reported expenses. Mr. Sansoucy also accounted for such factors as vacancy, management fees, and replacement reserves, for which he used rates of 5.0%, 3.0%, and 1.0%, respectively, to arrive at an operating cash flow.

The next step is the application of a discount factor, which reflects the cost of capital and is determined through the calculation of a weighted average cost of capital using the band-of-investment technique. The weighted average cost of capital includes debt and equity components, to which are added the appropriate tax factors, for a total weighted average cost of capital. The calculated operating cash flow is then multiplied by the discount factor to arrive at an annual discounted cash flow.

Final indicated values are determined in discounted-cash-flow analyses by adding the total of the annual calculated discounted cash flows to the present value of the final year cash flow, in this case, year 20. After these final calculations, Mr. Sansoucy's discounted-cash-flow analysis resulted in indicated values for the subject property of $92,300,000 for fiscal year 2012 and $91,200,100 for fiscal year 2013.

**E. Mr. Sansoucy's Reconciled Cash Values**

After giving weight to the fair cash values indicated by each of the valuation methodologies he employed, Mr. Sansoucy ultimately concluded an overall indicated value for the subject property of $90,000,000 for both of the fiscal years at issue. For reasons that were not clear from the record, Mr. Sansoucy considered the subject property as being 95% in Billerica and 5% in Bedford, although it is taxed, by agreement of both municipalities, on a 90%/10% allocation. Therefore, to determine the value of the subject property located in Billerica, Mr. Sansoucy deducted 5% from his overall indicated value, to arrive at a final fair market value of $85,500,000 for both of the fiscal years at issue.

## V. The Board's Ultimate Findings

On the basis of the record in its totality, the Board first found and ruled that the subject property's highest and best use was its continued use as a data center, which was the opinion of both parties' expert appraisers. The Board next considered the appropriate methodology for valuing the subject property.

The Board ruled out the cost approach, which is primarily useful when valuing newer buildings or special-purpose properties. In determining that the cost approach was not a reliable method to value the subject property, the Board expressly rejected Mr. Sansoucy's conclusion that the subject property was a special-purpose property. Special-purpose properties are those properties having so singular or unusual a use and that are not bought or sold with frequency in the market, such that their value cannot be reliably ascertained by reference to market data. The evidence here showed that the subject building is a fairly typical single-story brick building, which began life as a manufacturing building in 1970 and was briefly used as an office building before being re-purposed as a data center in 2000. The Board concluded that the many different uses of the subject property in a 40-year time period militated against the finding that it was a special-purpose property, and its conversion into a data center did not make it one.

On the contrary, evidence regarding other data centers entered into the record showed that a wide variety of properties were finding new lives as data centers, including former warehouse buildings and mixed-use retail and office properties. For example, evidence regarding a data center located at One Summer Street in downtown Boston was entered into the record. That building is popularly known as the Macy's building, and has long housed both retail and office space, and only more recently on its fourth floor, a data center. The evidence showed that data centers can and do exist in all different building types, oftentimes alongside other, more traditional uses. Accordingly, based on its subsidiary finding that the subject property was not a special-purpose property, along with the fact that it was more than 40 years old as of the relevant dates of valuation, the Board concluded that the cost approach was not a reliable method with which to value the subject property.[5]

In addition, the Board ruled out the sales-comparison methodology as there was an insufficient number of timely, comparable market sales. Most of the sales included in the record were located out of state and thus were not highly

[5] Even had the Board concluded that the cost approach was an appropriate methodology for valuing the subject property, it still would not have adopted the values derived by Mr. Sansoucy through this approach. Substantial, credible evidence in the record demonstrated that many of the assumptions he used in his cost approach were incorrect, including the testimony of William Frick, Data Center Manager for the subject property. Mr. Frick provided credible testimony regarding the cost and useful lives of various building components, among other things, and the Board found that his testimony substantially undermined the probative worth of Mr. Sansoucy's cost approach.

comparable to the subject property, and moreover, some of them involved portfolio sales or sales involving non-realty components, including the sale of the subject property.

To that end, the Board gave no weight to the sale of the subject property. The evidence showed that the sale was an off-market transaction, and was undertaken as part of DRT's business-expansion strategy. The record also showed that the sale was part of a portfolio transaction, involving two other data centers besides the subject property, as well as personal and intangible property. Accordingly, the Board concluded that the sale price did not provide probative evidence of the fee-simple value of the subject property.

The Board likewise gave no weight to Mr. Sansoucy's sales-comparison analysis, which consisted entirely of an analysis of three different allocations of the subject property's sale price. As stated previously, the Board found that the sale of the subject property did not provide a reliable indication of value to begin with, and none of these allocations, which were undertaken for various accounting, reporting, and insurance purposes, involved valuations of the fee-simple interest of the subject property. Accordingly, the Board declined to use the sales-comparison analysis or to give weight to the estimates of value derived by Mr. Sansoucy in his sales-comparison analysis.

Having ruled out the sales-comparison and cost approaches, the Board concluded that the income-capitalization approach was the most reliable methodology with which to value the subject property. The Board reached this conclusion as the income-capitalization approach is often the favored approach for valuing income-producing properties, and moreover, it was an approach used by both of the parties' valuation experts.

However, the Board used only the direct-capitalization analysis and declined to give weight to Mr. Sansoucy's discounted-cash-flow analysis. The Board routinely rejects this methodology as inappropriate for *ad-valorem* tax purposes, and Mr. Sansoucy's analysis was no exception. As an initial matter, the Board noted that typical forecast periods for discounted-cash-flow analyses range from five to 15 years, with 10 years being considered standard. *See generally* APPRAISAL INSTITUTE, THE APPRAISAL OF REAL ESTATE 541 ($13^{th}$ ed., 2008). The 20-year period used by Mr. Sansoucy far exceeded these typical forecast periods, rendering it all the more speculative and less reliable.

In addition, the Board found that the discounted-cash-flow technique was particularly unsuitable for valuing a data center, which involves computer technology. The Board credited the testimony in the record, including some from Mr. Sansoucy himself, that because computer technology changes at such a rapid pace, it is difficult to predict trends for real estate in that industry. As such, the Board concluded that estimates predicated on a decades-long projected income stream would not provide a reliable indication of the subject property's fair market value for the fiscal years at issue.

Having concluded that the direct income-capitalization approach was the most reliable method to value the subject property, the Board next considered the appropriate factors for use in that analysis, including rents, expenses, vacancy factors, and a capitalization rate.

As between the analyses offered by both valuation experts, the Board found that the income and expense information proffered by Mr. Leary was more reliable and supported by market data. In contrast, Mr. Sansoucy made no meaningful comparison to market data and relied exclusively on the subject property's actual reported income and expense figures. The Board therefore adopted Mr. Leary's estimates for rent at $115.00 per square foot, reimbursement at $42.50 per square foot, and expenses of $70.00 per square foot.

For vacancy and credit loss, the Board found that Mr. Sansoucy's estimate of 5% was understated, while it found Mr. Leary's rates, which ranged from 12% to 15% for fiscal year 2012 and 15% to 17.5% for fiscal year 2013, to be overstated. The record showed that the subject property's actual 2011 occupancy rate was 90.6%, increasing to 96.2% the following year. In addition, Exhibit L entered into the record showed the occupancy rates of five Boston-area data centers owned by DRT. The 2011 occupancy rates of the five buildings, including the subject property, ranged from 90.6% to 100%, with an average of 96.15%. Similarly, Exhibit M was a document showing the occupancy rates of a competitor, Coresite, by region and year. That document showed occupancy rates of 87.3% for the Boston region for 2011, increasing to 92.5% the following year. Accordingly, on the basis of all of the evidence, the Board concluded a vacancy and credit loss rate of 10% for both of the fiscal years at issue.

With respect to capitalization rates, both parties' experts cited a number of sources, including rates published in industry publications as well as capitalization rates extracted from sales of data centers. Those sources showed a wide range of rates, which, for the most part, reflected a very gradual improvement of the economy from the economic recession that began in 2008. For example, quarterly rates reported in *Korpacz* were as follows:

| **Category** | **Fourth Q 2010** | **Fourth Q 2011** | **Fourth Q 2012** |
|---|---|---|---|
| Boston Office | 8.21% | 8.11% | 7.84% |
| Suburban Office | 8.17% | 8.04% | 7.43% |
| Flex R & D | 9.15% | 8.9% | 8.71% |

Mr. Leary ultimately concluded rates ranging from 9.5% to 9.75% for fiscal year 2012 and 9.25% to 9.5% for fiscal year 2013, to which he added appropriate tax factors. Although these rates were slightly higher than those cited by *Korpacz* and other sources, Mr. Leary opined that a marginally higher rate was warranted in order to reflect the growth of the data center industry and increasing competition. Mr. Sansoucy, for his part, used a capitalization rate of 10% for both fiscal years, and he was non-committal as to whether that figure included a tax factor.

The Board found fault with the assumptions made by both parties' experts. Of particular importance was the industry information regarding data centers that was entered into the record. That information, including 2010 articles published in business and data center industry publications such as *The Charlotte Business Journal, Five 9s Digital*, and *Co-Star*, showed that data centers are generally appealing to investors because they offer a relatively quick return on investment. These publications also indicated that data centers did not suffer as drastically as other types of properties during the recession. One CB Richard Ellis employee said of data centers: "Money [is] no longer on the sidelines, it's very much in the game."

Accordingly, the Board concluded that Mr. Leary's selected base capitalization rates were too high. His selected rates exceeded the average fourth quarter rates for each property type as published in *Korpacz*, and moreover, they failed to adequately take into consideration the desirability of data centers as investments.

Conversely, the Board found that Mr. Sansoucy's capitalization rate was too low. In his direct income-capitalization approach, Mr. Sansoucy used a capitalization rate of 10.0%. He initially testified that this figure did not include a tax factor, because he believed the leases at the subject property were triple-net leases, under which the tenant is responsible for the payment of real estate taxes. The record showed that this was not the case. He later stated that the 10.0% capitalization rate did in fact take into consideration the tax factors because they were premised, in part, on the capitalization rates determined through his discounted-cash-flow analysis, which had included the tax factor for each of the fiscal years at issue. Given Billerica's commercial tax rates, which exceeded $30.00 per thousand for both of the fiscal years at issue, it follows that Mr. Sansoucy's base capitalization rates would have been less than 7.0% for both of the fiscal years at issue. The Board found that the record did not support such low base capitalization rates, and the Board therefore rejected Mr.Sansoucy's suggested capitalization rate.

As it had with the vacancy and credit loss rate, the Board exercised its own judgment and selected from among the evidence in the record to determine appropriate capitalization rates. Based on the record in its totality, the Board determined that base capitalization rates of 9.0% for fiscal year 2012 and 8.5% for fiscal year 2013 were appropriate. To these base capitalization rates the Board added split tax factors, which took into account the fact that the subject property is taxed by both Billerica and Bedford.

After applying these capitalization rates to its calculated net operating income, the Board determined final, rounded fair cash values for the subject property of $56,100,000 for fiscal year 2012 and $58,000,000 for fiscal year 2013. The Board's income-capitalization methodology is reproduced below.

**The Board's Income Capitalization Analysis for Fiscal Year 2012**

**Income**:

| | |
|---|---|
| Rent 106,000 sf @ $115.00/psf | $12,190,000 |
| Reimbursements @ $42.50/sf= | $4,505,000 |
| **Potential Gross Income ("PGI")** | $16,695,000 |
| Vacancy @ 10% | ($1,669,500) |
| **Effective Gross Income ("EGI")** | $15,025,500 |
| Expenses @ $70.00/psf= | ($7,420,000) |
| **Net Operating Income ("NOI")** | $7,605,500 |

| | |
|---|---|
| Base Capitalization Rate of 9.0% | 9.0 |
| Billerica tax factor of $31.90 @ 90% | 2.87 |
| Bedford tax factor of $33.21 @ 10% | 0.32 |
| Overall Capitalization Rate | 12.20 |
| Total Indicated Value of Subject Property $7,605,500/.122 | $62,340,163 |
| Value of Billerica Portion @ 90%, Rounded | **$56,100,000** |

**The Board's Income Capitalization Analysis for Fiscal Year 2013**

**Income:**

| | | |
|---|---|---|
| Rent 106,000 sf @ $115.00/sf | | $12,190,000 |
| Reimbursement @ $42.50/sf | | $4,505,000 |
| **PGI** | | $16,695,000 |
| Vacancy at 10% | | ($1,669,500) |
| **EGI** | | $15,025,500 |
| Expenses at $70/ psf | | ($7,420,000) |
| **NOI** | | $7,605,500 |
| Base Capitalization Rate of 8.5% | | 8.50 |
| Billerica tax factor of $32.9 @ 90% | | 2.96 |
| Bedford tax factor of 33.8 @ 10% | | 0.34 |
| | | 11.80 |
| Total Indicated Value of Subject Property | $7,605,500/.118 | $64,453,389 |
| Value of Billerica Portion @ 90%, Rounded | | **$58,000,000** |

Based on the evidence of record, the Board found and ruled that the appellant met its burden of demonstrating that the subject property was overvalued for both of the fiscal years at issue and determined fair cash values for the subject property of $56,100,000 for fiscal year 2012 and $58,000,000 for fiscal year 2013. Accordingly, the Board issued decisions for the appellant in these appeals, and granted abatements of $93,752.87 for fiscal year 2012 and $34,080.62 for fiscal year 2013.

## OPINION

The assessors are required to assess real estate at its fair cash value. G.L. c. 59, § 38. Fair cash value is defined as the price on which a willing seller and a willing buyer will agree if both of them are fully informed and under no compulsion. ***Boston Gas Co. v. Assessors of Boston,*** 334 Mass. 549, 566 (1956). In determining fair cash value, all uses to which the property was or could reasonably be adapted on the relevant assessment dates should be considered. ***Newton Girl Scout Council, Inc. v. Massachusetts Turnpike Authy.,*** 335 Mass. 189, 193 (1956); ***Irving Saunders Trust v. Assessors of Boston***, 26 Mass. App. Ct. 838, 843 (1989). The idea is to ascertain the maximum value of the property for any legitimate and reasonable use. ***Id.*** Based on the record, the Board found and ruled that the highest-and-best use for the subject property was its existing use as a wholesale data center. Both parties' valuation experts considered this to be the subject property's highest and best use as well.

Generally, real estate valuation experts, the Massachusetts courts, and this Board rely upon three approaches to determine the fair cash value of property: income capitalization, sales comparison, and cost. ***Correia v. New Bedford Redevelopment Authority,*** 375 Mass. 360, 362 (1978). "The [B]oard is not required to adopt any particular method of valuation." ***Pepsi-***

***Cola Bottling Co. v. Assessors of Boston,*** 397 Mass. 447, 449 (1986).

In these appeals, the Board found and ruled that the sales-comparison approach was not an appropriate methodology to use to estimate the value of the subject property because there were not enough local market sales of comparable property to provide a reliable basis for comparison. The Board further found and ruled that "[t]he introduction of evidence concerning the value based on [cost] computations has been limited to special situations in which data cannot be reliably computed under the other two methods," ***Correia,*** 375 Mass. at 362, and those situations may include when the property in question is a newer building or a special-purpose property. The Board found and ruled that no such "special situations" existed here.

The subject property was over 40 years old as of the relevant dates of valuation, and the Board concluded that the subject property was not a special-purpose property. This conclusion was supported by the record evidence in this case, which showed the flexible nature of the subject building and of data centers in general, and also comports with how other courts have treated data centers. *See* ***Fisher Media v. Noble,*** 2006 Wash. Tax Lexis 890 at *6 (Wash. Bd. Tax Appeals, May 24, 2006) (finding that the cost approach to value was not a reliable method for valuing an office building with data center and instead using the income-capitalization method because the "property is not of a complex nature; it is an office building with a parking garage"). Accordingly, the Board found and ruled that the cost approach was not appropriate for valuing the subject property for the fiscal years at issue.

The income-capitalization approach is an appropriate technique to use for valuing income-producing property, particularly when the other valuation methodologies are not suitable. *See, e.g.,* ***Georgetown Shopping Ctr., LLC v. Assessors of Georgetown***, Mass. ATB Findings of Fact and Reports 2015-612, 638-39. In the present appeals, both parties' valuation experts used the direct income-capitalization approach to value the subject property, while Mr. Sansoucy also performed another variation of this methodology, the discounted-cash flow analysis. As stated above, the Board routinely rejects the discounted-cash-flow technique as an appropriate valuation methodology for *ad valorem* tax purposes, and it did so again here. *See* ***Joseph Iantosca, et. al. v. Assessors of Weymouth,*** Mass. ATB Findings of Fact and Reports 2008-929, 952 ("The discounted-cash-flow analysis has never been relied upon by the Board as a primary valuation methodology."); ***Mayflower Emerald Square, LLC v. Assessors of North Attleborough,*** Mass. ATB Findings of Fact and Reports, 2007-421, 523-24 (ruling that the discounted cash flow analysis was not appropriate for determining fee simple interests for *ad valorem* tax purposes); ***GLW Kids LLC v. Assessors of Carlisle,*** Mass. ATB Findings of Fact and Reports 2016-53, 73, *aff'd,* Mass. App. Ct. No. 16-P-729, Memorandum and Order under Rule 1:28 (July 12, 2017). The Board therefore adopted the direct income-capitalization approach as the most reliable method to use to value the subject property.

Under this approach, a property's capacity to generate income over a one-year period is analyzed and converted into an indication of fair cash value by capitalizing the income at a rate determined to be appropriate for the investment risk involved. ***Olympia & York State Street Co. v. Assessors of Boston,*** 428 Mass. 236, 239 (1998). Net operating income is obtained by subtracting expenses from gross income. ***Assessors of Brookline v. Buehler,*** 396 Mass. 520, 523 (1986). The capitalization rate should reflect the return on investment necessary to attract investment capital. ***Taunton Redevelopment Associates v. Assessors of Taunton,*** 393 Mass. 293, 295 (1984).

The income stream used in the income-capitalization method must reflect the property's earning capacity or economic rental value. ***Pepsi-Cola Bottling Co.,*** 397 Mass. at 451. Imputing rental income to the subject property based on fair market rentals from comparable properties is evidence of value if, once adjusted, they are indicative of the subject property's earning capacity. *See* ***Correia v. New Bedford Redevelopment Auth.***, 5 Mass. App. Ct. 289, 293-94 (1977), *rev'd on other grounds,* 375 Mass. 360 (1978); ***Library Services, Inc. v. Malden Redevelopment Auth.***, 9 Mass. App. Ct. 877, 878 (1980)(rescript); ***Avco Manufacturing Corp. v. Assessors of Wilmington***, Mass. ATB Findings of Fact and Reports 1990-142, 166. After accounting for vacancy and rent losses, the net-operating income is obtained by deducting appropriate expenses. ***Pepsi-Cola Bottling Co.***, 397 Mass. at 452-53. "The issue of what expenses may be considered in any particular piece of property is for the board." ***Alstores Realty Corp. v. Assessors of Peabody***, 391 Mass. 60, 65 (1984).

In the present appeals, the Board found that the income and expense information – specifically the rents, reimbursements, and expenses - suggested by Mr. Leary were more supported by the market data in evidence than those offered by Mr. Sansoucy, which were premised almost entirely on the subject property's actual income and expense information. "Without sufficient consideration of market data, actual rents and expenses cannot be presumed to accurately reflect the property's fair market value earning capacity." ***45 Rice Street Realty Trust v. Assessors of Cambridge,*** Mass. ATB Findings of Facts and Reports 2007-1269, 1326. Accordingly, the Board gave primary weight to the range of market rents selected by Mr. Leary, albeit at the higher end of his range.

With respect to the estimates for vacancy and credit loss, as well as the capitalization rates, the Board found and ruled that neither of the valuation experts selected rates that were reflective of the data center market during the fiscal years at issue. In reaching its opinion of fair cash value in these appeals, the Board was not required to believe the testimony of any particular witness or to adopt any particular method of valuation that an expert witness suggested. Further, the mere qualification of a person as an expert does not endow his testimony with any magic qualities. ***Boston Gas Co.,*** 334 Mass. at 579. "The credibility of witnesses, the weight of the evidence, and inferences to be drawn from the evidence are matters for the board." ***Cummington School of the Arts, Inc. v. Assessors of Cummington,*** 373 Mass. 597, 605 (1977). The Board can accept those portions of the evidence that it determined had more convincing weight. ***Foxboro Associates v. Assessors of Foxborough,*** 385 Mass. 679, 683 (1982); ***Board of Assessors of Lynn v. New England Oyster House, Inc.,*** 362 Mass. 696, 702 (1972). In evaluating the evidence before it in these appeals, the Board selected among the various elements of value and formed its own independent judgment of fair cash value. ***General Electric Co. v. Assessors of Lynn,*** 393 Mass. 591, 605 (1984);

***North American Philips Lighting Corp. v. Assessors of Lynn,*** 392 Mass. 296, 300 (1984).

"'The burden of proof is upon the [appellant] to make out its right as a matter of law to abatement of the tax.'" ***Schlaiker v. Assessors of Great Barrington,*** 365 Mass. 243, 245 (1974)(quoting ***Judson Freight Forwarding Co. v. Commonwealth***, 242 Mass. 47, 55 (1922)). In the present appeals, the Board found and ruled that the appellant met its burden of proving that the subject property was overvalued for both fiscal years at issue in these appeals. On the basis of the record in its entirety, the Board found and ruled that the fair cash value of the subject property was $56,100,000 for fiscal year 2012 and $58,000,000 for fiscal year 2013.

The Board therefore issued decisions in favor of the appellant and granted abatements in the amount of $93,752.87 for fiscal year 2012 and $34,080.62 for fiscal year 2013.

**THE APPELLATE TAX BOARD**

**By**: ___________________________________
**Thomas W. Hammond., Jr., Chairman**

**A true copy,**

**Attest:** ______________________________
**Clerk of the Board**